

Columbia Forest Products)	Departmental
Aroostook County)	Findings of Fact and Order
Presque Isle)	Air Emission License
A-353-71-F-R)	

After review of the air emissions license amendment application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Columbia Forest Products (CFP) of Presque Isle, Maine has applied to renew their Air Emission License permitting the operation of emission sources associated with their hardwood veneer manufacturing facility.

B. Emission Equipment

CFP is authorized to operate the following equipment:

Fuel Burning Equipment

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate</u>	<u>Fuel Type, % sulfur</u>	<u>Stack #</u>
Boiler #1	15.0	3750 lb/hr	wood waste, 50% moisture	1
Boiler #2	15.0	3750 lb/hr	wood waste, 50% moisture	2
Veneer Dryer #1	27.0	4120 lb/hr	wood waste, 12% moisture	3, 4
Dryer Heater #1	5.0	35.7 gal/hr	#2 fuel oil, 0.5% sulfur	3, 4
Dryer Heater #2	5.0	35.7 gal/hr	#2 fuel oil, 0.5% sulfur	3, 4
Dryer Heater #3	5.0	35.7 gal/hr	#2 fuel oil, 0.5% sulfur	3, 4

Process Equipment

<u>Equipment</u>	<u>Pollutant Emitted</u>	<u>Stack #</u>
Veneer Dryer #2	VOC	9, 10, 11, 12

C. Application Classification

The application for CFP does not include the licensing of increased emissions or the installation of new or modified equipment. Therefore, the license is considered to be a renewal of current licensed emission units only.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emission from the source being considered; and
- the economic feasibility for the type of establishment involved.

Process Description

Columbia Forest Products produces hardwood veneer (mostly birch and maple) by the peeling of wood layers from whole tree logs. At the Columbia Forest Products facility only the very top visual layer is utilized for production purposes, and is used in the manufacturing of various types of paneling and plywood at other facilities.

First, the logs are conditioned in one of nine steam heated kilns for 42 to 66 hours. The steam is used to heat the logs which softens the wood. The logs are then machined by a lathe into veneer. The waste wood (called "green" wood waste) from the veneer process is conveyed to the Green Hammer Hog, where it is chipped to 2 inches or less. The green wood waste is pneumatically conveyed to a fuel bin which is controlled by a cyclonic separator on top of the fuel silo bin or to a wood waste storage pile.

The green waste wood is used as a fuel to fire Boilers #1 and #2, to produce steam for the wood kilns and facilitate other heating needs.

The sheets peeled off the log are typically a 36th of an inch in thickness. The peeled veneer is then dried in the Veneer Dryer and cut into sheets. The waste wood from this process (called “dry” wood waste) is conveyed to the Dry Kniffer Hog and then into the Dry Hammer Mill to produce one 8th of an inch fines. The dry waste wood is then pneumatically conveyed into the Energex Wood Burner to produce heat for the dryer system. The dry wood waste pneumatic system and the Dry Hammer Mill are controlled by cyclonic separators.

After the hardwood veneer is cut into sheets they are stacked and a glue is applied to each side in CFP’s glue application station. After the glue is applied, it is allowed to dry. The sheets are then fed through machines which reheat the glue and adhere the sheets together to form 4 x 8 foot sheets of finished veneer. The dry wood waste from this process is also conveyed to the wood waste silo.

B. Boilers #1 and #2

CFP operates Boilers #1 and #2 each of which have a maximum design heat input capacity of 15.0 MMBtu/hr firing wood waste (@ 0.008 MMBtu/lb, 0% moisture). Boilers #1 and #2 were manufactured in 1962 by ERIE and are therefore not subject to New Source Performance Standards (NSPS) Subpart Dc, for boilers with a heat input of 10.0 MMBtu/hr or greater and manufactured after June 9, 1989. BPT for Boilers #1 and #2 shall be the firing of wood waste as fuel. Boiler #1 and #2 each vent emissions through a 65 foot AGL stack (stacks #1 and #2), which represents 65% of Good Engineering Practice (GEP) stack height.

A summary of the BPT analysis for each of the pollutants is discussed below:

1. PM and PM₁₀ emission rates are based upon MEDEP Chapter 103.
2. SO₂, NO_x, CO and VOC emission rates are based upon AP-42 factors dated 2/99 for wood waste combustion in boilers.
3. Visible emissions from Boiler #1 and Boiler #2 shall each not exceed 30% opacity on a six-minute block average basis, except for no more than 2 six-minute block averages in any three-hour period.

C. Veneer Dryer #1

Veneer Dryer #1 has a maximum design capacity of 27.0 MMBtu/hr firing wood waste (@ 0.008 MMBtu/lb, 0% moisture). The Veneer Dryer also has three heaters, each with a maximum design capacity of 5.0 MMBtu/hr firing #2 fuel oil with a maximum sulfur content of 0.5% by weight. The Veneer Dryer was originally manufactured in 1973 by Proctor Schwartz to burn fuel oil, and was then modified by Energex in 1986 by installing the wood burner.

A summary of the BPT analysis for each of the pollutants is discussed below:

- a. PM emission rates are based upon MEDEP Chapter 103. PM₁₀ emission rates are based upon the previous license.
- b. SO₂, NO_x, CO and VOC emission rates are based upon AP-42 factors dated 9/98 for fuel oil combustion and 2/99 for wood waste combustion.
- c. Visible emissions from the dryer shall not exceed 20% opacity on a six-minute block average basis while firing fuel oil, and shall not exceed 30% opacity on a six-minute block average basis, except for no more than 2 six-minute blocks in any three hour period while firing wood waste.

D. Process Emissions

1. Wood Waste Handling System

The use of cyclones for the Green and Dry Pneumatic Systems and the Dry Hammer Mill represent BPT for control of particulate matter emissions.

Visible emissions from the Green and Dry Pneumatic Systems and the Dry Hammer Mill shall not exceed 20% opacity on a six-minute block average basis, except for no more than 1 six-minute block average basis in any one-hour period.

2. Glue Application System

VOC emissions are generated as a result of the glue application. In 1999, CFP used 47,050 lbs. of glue, with a VOC content of 0.1% by weight. Assuming all of the volatile components in the finish are emitted as VOC vapor, actual VOC emissions from glue application equals less than 1.0 ton/yr. CFP shall limit VOC emissions from glue application to 2.0 ton/yr.

E. Annual Emission Restrictions

CFP shall be restricted to the following annual emissions, based on a 12-month rolling total:

Total Allowable Annual Emission for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/Year</u>
PM	44.9
PM ₁₀	28.2
SO ₂	7.4
NO _x	9.5
CO	69.0
VOC	29.3

III.AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. CFP has an emission limit for PM₁₀ of 28.2 TPY, which would thereby require them to perform air quality analyses. In 1995, the Department modeled the PM₁₀ emissions for CFP from the boilers #1 and #2 and found that PM₁₀ emissions are meeting Maine Ambient Air Quality Standards with the following maximum impacts of (using the ISCST3 screening model):

Pollutant	Ave. Period	Impact (µg/m³)	Standard (µg/m³)
PM ₁₀	24-hour	98.26	150
PM ₁₀	annual	19.65	40

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-353-71-F-R subject to the following conditions:

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which

- any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions.
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115.
 - (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both.
 - (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request.
 - (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. \ 353.
 - (6) The license does not convey any property rights of any sort, or any exclusive privilege.
 - (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions.
 - (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request.
 - (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license.

- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license.
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- (i) perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - a. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - b. pursuant to any other requirement of this license to perform stack testing.
 - (ii) install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - (iii) submit a written report to the Department within thirty (30) days from date of test completion.
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- (i) within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - (ii) the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - (iii) the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to

a demonstration of compliance under normal and representative process and operating conditions.

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement.
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation.
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status.

SPECIFIC CONDITIONS

- (16) Boilers #1 and #2
- A. Capacity shall not exceed 15.0 MMBtu/hr in each boiler.
- B. Fuel use shall not exceed 10,000 ton/yr of wood (facility-wide) at 0% moisture. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.
- C. Emissions shall not exceed the following:

Equipment		PM	PM₁₀	SO₂	NO_x	CO	VOC
Boiler #1	lb/MMBtu	0.54	-	-	-	-	-
	lb/hr	4.05	4.05	0.07	1.41	12.8	0.21
Boiler #2	lb/MMBtu	0.54	-	-	-	-	-
	lb/hr	4.05	4.05	0.07	1.41	12.8	0.21

- (17) Veneer Dryer #1
- A. Capacity shall not exceed 5.0 MMBtu/hr in each oil-fired dryer heater, and 27.0 MMBtu/hr in the wood-fired dryer heater.

- B. Fuel use shall not exceed 10,000 ton/yr of wood (facility-wide), and 200,000 gallons per year of #2 fuel oil with a maximum sulfur content of 0.5% by weight. Fuel use records shall be maintained on a monthly basis, in addition to the 12-month rolling total.
- C. Emissions from fuel firing shall not exceed the following:

Equipment		PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Veneer Dryer #1 (wood)	lb/MMBtu	0.45	-	-	-	-	-
	lb/hr	12.69	12.69	0.08	1.55	14.01	0.23
Heater #1 (#2 fuel oil)	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.60	0.60	2.54	0.72	0.18	0.02
Heater #2 (#2 fuel oil)	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.60	0.60	2.54	0.72	0.18	0.02
Heater #3 (#2 fuel oil)	lb/MMBtu	0.12	-	-	-	-	-
	lb/hr	0.60	0.60	2.54	0.72	0.18	0.02

- (18) Visible emissions from Boilers #1 and #2 shall not exceed 30% opacity on a six-minute block average basis, except for no more than 2 six-minute block averages in any three-hour period.
- (19) Visible emissions from Veneer Dryer #1 shall not exceed 30% opacity on a six-minute block average basis, except for no more than 2 six-minute block averages in any three-hour period while firing wood waste, and shall not exceed 20% opacity on a six-minute block average basis while firing #2 fuel oil.
- (20) Visible emissions from the Dry Hammer Mill cyclone, Green Pneumatic System cyclone and Dry Pneumatic System cyclone shall not exceed 5% opacity on a six-minute block average basis.
- (21) VOC emissions shall not exceed 4.0 lb/hr and 17.4 ton/yr from Veneer Dryer #1, and shall not exceed 2.0 lb/hr and 8.7 ton/yr from Veneer Dryer #2.
- (22) VOC emissions from the Glue Application Station shall not exceed 2.0 tons/yr.

**Columbia Forest Products
Aroostook County
Presque Isle, Maine
A-353-71-F-R**

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**Departmental
Findings of Fact and Order
Air Emission License**

(22) The term of this Order shall be for five (5) years from the signature below.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2000.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
MARTHA G. KIRKPATRICK, COMMISSIONER

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 9, 2000

Date of application acceptance: February 17, 2000

Date filed with the Board of Environmental Protection: _____

This Order prepared by Elisha McVay, Bureau of Air Quality.